



LAPLACE for the origin and evolution of the Jovian system

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LAPLACE is a planned Jovian system mission with three spacecrafts aiming at coordinated observations of the Jovian satellites especially Europa and the magnetosphere, atmosphere and interior of Jupiter. In October 2007, it was selected as one of future ESA scientific missions Cosmic Vision (2015-2025). From the beginning, Japanese group is participating in the discussion process of the mission. There is a possibility that JAXA will take a role on the magnetosphere spinner (and if possible one of the launchers).

On the basis of the scientific interest, Japanese scientists working on the origin and evolution of Jupiter, satellite evolution, and astrobiology have been participating in the working group in Japan. Detailed observation of Europa (and Ganymede and Io if possible) would be important also for the study of the origin of Jovian system. Resurfacing processes on Europa and Ganymede should be studied to know the properties of the internal oceans.

In Japan, the lunar explorer Kaguya is ongoing successfully, and Venus remote sensing mission (PLANET-C) will be launched in 2011. Several instruments such as cameras, spectrometers, altimeter, sounder and magnetometer should be applied using the heritage of Kaguya and PLANET-C.